CLAIMS

1. A method for radio communication in a wireless local network including at least one transceiver equipped with an antenna with a controlled directivity pattern, wherein said method implies that with the aid of said transceiver with the controlled directivity pattern the information exchange with any transceiver from the network is performed, the current value of communication quality Q_{cur} is determined <u>periodically</u> in the course of information exchange based on the signal being received and the procedure for the optimization of antenna beam direction is <u>periodically</u> performed, at that, the threshold communication quality value H_0 (corresponding to the minimum pre-assigned communication quality) is assigned in advance, and with the current communication quality value Q_{cur} being less than the said threshold value H_0, the said procedure for the optimization of antenna beam direction is performed until the current communication quality value Q_{cur} is equal or exceeds the said threshold value H_0, **wherein** the threshold communication quality value H_{max} (corresponding to the maximum pre-specified communication quality) is additionally assigned in advance, at that, with the current communication quality value Q_{cur} being greater than or equal to the said threshold value H_{max}, the data exchange is continued, while with current communication quality value Q_{cur} being less than the said threshold value H_{max}, but greater than or equal to the said threshold value H_0, the next procedure for the optimization of the antenna beam direction is carried out after a pre-specified time interval T.

2. The method of claim 1, wherein the data transmission is interrupted for the period of the said optimization of the antenna beam direction.

3. The method of claim 1, wherein the data reception is interrupted for the period of the said optimization of the antenna beam direction.

4.   The method of claim 1, wherein the antenna beam direction is changed at least once during the said procedure for the optimization of antenna beam direction, the communication quality value is determined for every new direction of the antenna beam, the highest value is determined among all the communication quality values obtained for different antenna beam directions and then memorized as current communication quality value Q_{cur}.

5.   The method of claim 4, wherein the direction of the antenna beam is changed by azimuth bearing and/or by elevation angle.

6.   The method of claim 4, wherein the direction of the antenna beam is changed by switching-over the directivity pattern of the antenna.

7.   The method of claim 1, wherein at least one intermediate threshold communication quality value H_j, complying with the correlation $H_0 < H_{int(j)} < H_{max}$, where $j = 1, 2... N$, is additionally assigned in advance, then one of the said threshold values H_0, H_j or H_{max} (which is the closest greater or closest lesser value to the said current communication quality value Q_{cur}) is selected and memorized as the current threshold $H_{cur(i)}$; in this case the said time interval T is decreased, if, as a result of the next determination of the current threshold value Q_{cur}, value of $H_{cur(i)}$ is found to be decreased as compared to its memorized previous value $H_{cur(i-1)}$.

8.   The method of claim 7, wherein the value of the said time interval T is compared with the assigned in advance minimum value of T_{min}, and with T being equal to or less than T_{min}, the time interval T is assumed to be equal to the value of T_{min}.

9.   The method of claim 7, wherein the said time interval T is increased, if, the current threshold value $H_{cur(i)}$ is found to be increased as a result of the next determination of communication quality Q_{cur}, as compared to its memorized previous value $H_{cur(i-1)}$.

10. The method of claim 9, wherein the value of the said time interval T is compared with the assigned in advance maximum value of T_{max}, and with T being equal to or greater than T_{max}, the time interval T is assumed to be equal to the value of T_{max}.

11. The method of claim 7, wherein the said time interval T is increased, if the current threshold value $H_{cur(i)}$ is found to be unchanged as a result of the next determination of communication quality Q_{cur} as compared to its memorized previous value of $H_{cur(i-1)}$.

12. The method of claim 11, wherein the value of the said time interval T is compared with the assigned in advance maximum value of T_{max}, and with T being equal to or greater than T_{max}, the time interval T is assumed to have the value of T_{max}.

13. The method of claim 11, wherein the said time interval T is decreased, if the current threshold value $H_{cur(i)}$ is found to be increased as a result of the next determination of communication quality Q_{cur} as compared to its memorized previous value $H_{cur(i-1)}$.

14. The method of claim 13, wherein the value of the said time interval T is compared with the assigned in advance minimum value T_{min}, and with T being equal to or less than T_{min}, the time interval T is assumed to be equal to the value of T_{min}.

15. The method of claim 1, wherein at least one intermediate threshold value of communication quality H_j, complying with the correlation $H_0 < H_j < H_{max}$, where $j = 1, 2 \ldots$ N, is additionally assigned in advance, then one of the said threshold values of H_0, H_j, or H_{max} (which is the closest greater or closest lesser value to the said current communication quality value Q_{cur}) is selected and memorized as the current threshold value $H_{cur(i)}$, in this case the performance of the next said procedure for the optimization of antenna beam direction is omitted, if on the expiration of the said time interval T the value of the current threshold $H_{cur(i)}$ remains unchanged as compared to its memorized previous value $H_{cur(i-1)}$.

16. The method of claim 15, wherein the sum of the omitted said time intervals T is compared with the assigned in advance maximum interval T_{max}, and with T being equal to or greater than T_{max}, the time interval T is assumed to be equal to the value of T_{max}.

17. The method of claim 1, wherein the said current communication quality value Q_{cur} is determined based on the signal being received as a response to the transmitted request.

18. The method of claim 1, wherein the said current communication quality value Q_{cur} is determined based on at least one parameter of the signal being received .

19. The method of claim 18, wherein the level of a signal being received is measured as the said parameter of the signal being received.

20. The method of claim 18, wherein the ratio of the level of a signal being received to the level of noise is measured as the said parameter of the signal being received.

21. The method of claim 18, wherein the relation of the level of a signal being received to the level of interference is measured as the said parameter of the signal being received.

22. The method of claim 18, wherein the error ration is measured as the said parameter of the signal being received.